

**UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF NEW JERSEY**

ANDY KIM, et al.,

Plaintiffs,

v.

CHRISTINE GIORDANO HANLON, in  
her capacity as Monmouth County Clerk,  
et al.,

Defendants.

Civil Action No.3:24-cv- 1098(ZNQ)(TJB)

**SUPPLEMENTAL CERTIFICATION  
OF RYAN MACIAS IN RESPONSE  
TO DEFENDANTS' MOTIONS IN  
LIMINE (ECF 152-2; ECF 158) AND  
IN RESPONSE TO SUPPLEMENTAL  
CERTIFICATION PROFERED BY  
B.SWARTZ (ECF 151)**

I, Ryan Macias, do hereby certify:

1. I was retained on this matter on Saturday March 9, 2024, three days after several opposition briefs and supporting certifications were filed on Wednesday March 6, 2024.
2. On Tuesday March 12, 2024, Plaintiffs' counsel added me to the preliminary/tentative witness schedule and communicated this to defense counsel.
3. On Wednesday March 13, 2024, Plaintiffs' counsel sought the Court's advisement regarding my potential participation as an expert witness to attend the Evidentiary Hearing via zoom, if necessary, to offer testimony as a subject matter expert in election technology, security, and policy with over eighteen years of experience (ECF 110). I had at the time been in the midst of coordinating travel and related work calendar logistics with partners to attend the 2024 Summit for Democracy in Seoul, South Korea, which is under the Presidential Initiative for Democratic Renewal and co-chaired by Secretary of State Antony J. Blinken and the Prime Minister of South Korea. The first day of the summit was March 18, 2024, Korean Standard Time (13 hours ahead of EDT). The Court

quickly granted Plaintiffs' request to coordinate remote video conferencing for my potential testimony (ECF 111).

4. Later that evening, on Wednesday March 13, 2024, I completed an expert report which was promptly filed on the docket that same day at exactly 8:00 pm (ECF 115-1). It was submitted as a 29-page affidavit, which appended my CV and set out my expert credentials and qualifications; the certification requirements for voting technologies and systems including those in use in New Jersey; an analysis of those systems with explanation of how they can and do accommodate office block templates and/or layout presentations for voters on paper and electronic ballot interfaces; examples of such presentations in other states employing the same technologies and systems; and rebuttal of certifications previously submitted, including that of Benjamin Swartz the Principal State Certification Manager for ES&S (ECF 46); Holly Mackey, the Warren County Clerk (ECF 57-1); and David Passante, the co-owner of Royal Printing Service (ECF 65-1). Because of some of the technical discussions in those certifications, especially those of Swartz, it was not immediately apparent to me whether they were being offered as expert witnesses or in some other capacity.
5. In preparing my written analysis, I relied on my personal knowledge, my review of the pleadings in this matter, and my review of other documents and communications identified therein.
6. With the Court's permission, I was able to testify remotely from South Korea on March 18, 2024, EDT, and was the first testifying witness.
7. Just after the start of the Evidentiary Hearing on March 18, 2024, Ben Swartz submitted a supplemental certification (ECF 151). I have reviewed the supplemental certification of Mr. Swartz. My response follows.
8. In Paragraph 8, of the supplemental certification,<sup>1</sup> Mr. Swartz states that ES&S would need to "conduct extensive internal accuracy testing" "[w]ith any significant ballot design change, such as the one proposed in the lawsuit[.]" While I agree with Mr. Swartz that a significant change would require ES&S to conduct extensive internal accuracy testing, I

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<sup>1</sup> Please note that there is a typographical error in Mr. Schwartz's supplemental certification resulting in two paragraph 8s; this is in reference to the first paragraph 8.

disagree with Mr. Swartz's assessment that the plaintiffs' proposed relief is a "significant ballot design change."

9. Throughout my career, I have been criticized for requiring voting system vendors - including ES&S - to go through testing and certification, both at the EAC and in California, for implementing significant changes to their voting system. Further, I have been criticized for requiring testing of even very minor changes to the voting system software, such as the implementation and introduction of a new font that was not previously part of the voting system and had not been tested as part of the election management system. Therefore, I fully understand, and have expertise in, assessing what a significant change is, as well as when certification testing, including recertification, should occur.
10. Plaintiffs' request is for the Court to prohibit: (1) a ballot designed by columns and rows rather than office sought; (2) letting a ballot position draw for one candidate control the ballot position of a candidate pursuing a different office; (3) place candidates with an incongruous separation from other candidates running for the same office; (4) mixing the horizontal and vertical listing of candidates for a particular office; and (5) bracketing candidates on the ballot such that candidates for different offices are featured on the same column (or row) of the ballot. (DE5). The simplest and most obvious way to implement these injunctions would be to present all races on the ballot to voters in office-block format. *If the Court were to grant this request for injunctive relief and/or require the presentation of all races in office-block display, it is my expert opinion that none of these, singly or together, would require new testing, certification, or recertification of any ES&S system in use in New Jersey.*<sup>2</sup>
11. Additionally, I have worked with ES&S for over 18 years, and I agree with Mr. Swartz that ES&S has very strict and thorough internal testing processes. As a company, ES&S takes great care in doing its due diligence to ensure it does not release software changes and modifications without being properly tested, and when applicable properly certified.
12. With that stated, I also do not doubt Mr. Swartz's assessment in Paragraph 9 that states internal accuracy testing related to a significant ballot design change takes two weeks.

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<sup>2</sup> As I testified, this same conclusion also applies to the Dominion voting system certified by the Secretary of State and approved for use in New Jersey elections.

Again, my disagreement is that any or all of the requests for injunctive relief sought by Plaintiffs, if granted would trigger the need for additional internal testing.

13. The plaintiffs' request for relief offers a few options for ballot layout design changes. Every design change suggested comports with the way the exact same voting system is used in other jurisdictions that ES&S already works with. Therefore, the plaintiffs' request for relief solely asks ES&S, its customers, or its third-party programmers (i.e., those authorized to use the ES&S software) to use a design that should have already been internally accuracy tested by ES&S.
14. The design methods should have been internally tested by ES&S, as described by Mr. Swartz, before EAC testing and certification processes, since EAC tests both the traditional office block ballot layouts for which the plaintiff is suggesting. Further, the EAC tests the ExpressVote XL grid-based layout without the New Jersey "county-line" format since all ES&S jurisdictions, absent New Jersey jurisdictions, use the ExpressVote XL without the county line style. Therefore, ES&S should have internally accuracy tested both styles, at minimum, prior to EAC testing.
15. As shown in the exhibits that were put forth in front of the court, testimony provided about how other states use the exact same software versions to design ballots without the county-line style, testimony about how New Jersey counties already use office block ballot layouts in whole or in part, and my personal testing of the ES&S voting systems used in New Jersey for other states, I know that the voting system has been tested using the plaintiffs' suggested ballot layout formats. Therefore, I have all reason to believe, knowing ES&S and its thorough internal testing process, that the ballot layout formats suggested in the plaintiffs' request for relief have already been extensively tested internally by ES&S.
16. In Paragraph 8,<sup>3</sup> Mr. Swartz falsely represents my claim regarding the testing and recertification of the voting system. First, Mr. Swartz decided to only quote a portion of the statement - the portion that best suits his argument - which takes the actual statement out of context. The pertinent statement in paragraph 51 of my expert report, that Mr. Swartz quotes in part, actually states that "[i]f in fact the ES&S system can handle any

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<sup>3</sup> Please note that there is a typographical error in Mr. Schwartz's supplemental certification resulting in two paragraph 8s; this is in reference to the second paragraph 8, which would otherwise be paragraph 11.

style" - which was a statement by the defendants' witness, Ms. Mackey, Warren County Clerk, in her Certification - then "there is no need to recertify or retest the voting system certified by the Secretary of State and approved for use in New Jersey Elections." The statement comes at the end of paragraph 51 of my expert report, which quotes and incorporates the acknowledgment within the Mackey Certification that "[t]he ES&S system has the ability to technically allow a ballot design which is either based on a bubble ballot, a design referenced by Plaintiffs in their Complaint, or bracketing of candidates, including the use of a county organization line ("organizational line") at the request of a county or local political party organization. In other words, the ES&S system can handle any style of ballot that I need it to."

17. County Clerk Mackey later qualified in a March 15, 2024, Supplemental Certification that her characterization applies to all paper ballots – rather than electronic ballot interface (March 15, 2024, Supplemental Certification by Holly Mackey, ECF 139). Even taking Clerk Mackey's limitation into account, and assuming for the moment that it is complete and accurate – then it is my expert opinion that there is no need to recertify or retest the voting system certified by the Secretary of State and approved for use in New Jersey elections, at least with respect to the limitation she imposes regarding its application to paper ballots (Supplemental Cert by Mackey, Paragraph 3, "I have experience using ES&S for the creation of a bubble ballot for paper ballots only, including those referenced in my previous Certification in 2018 and 2019 elections.").
18. In the paragraph labeled 13, Mr. Swartz asserts that "any time a ballot layout is redesigned or deviated from what was demonstrated during the voting system certification or the established ballot layout practices currently done in New Jersey" there is risk of tabulation error. Furthermore, he asserts that I ignore this risk. While I do not disagree that the redesign and change in ballot layout introduces risks, I fully disagree with his assertion that I ignore such risks.
19. First, every election has a unique ballot, and therefore a unique layout, even if it is based on a previous and/or commonly used template. Based on Mr. Swartz's rationale, this would mean that the voting system would have to be recertified prior to every election - and not just once an election cycle, but every *single* election (e.g., federal, state, local, primary, general, municipal, etc.). This is not the case nor is it feasible.

20. With that stated, the risk Mr. Swartz asserts that I have ignored, is in fact the reason that county election officials should conduct pre-election Logic and Accuracy testing prior to every election to which I agree and alluded to in both the expert report and my testimony at the Evidentiary Hearing. As a matter of fact, the State of New Jersey specifically addresses the need to test, not recertify, the ballot layout prior to every election. In the New Jersey Guidelines for the Conduct of Early Voting,<sup>4</sup> updated on October 18, 2022, Page 7 of the guidelines document, under the heading of "Voting Equipment" it states: "Pre-Election Logic and Accuracy Testing (Pre-LAT) requires a thorough testing of voting machines used during early voting and on Election Day." Further, it reads "**Ensure all voting options are cross-checked against one another for accuracy**" (Emphasis in original). The testing by the local jurisdiction is to ensure that the ballot layout (logic) is correctly displayed and interpreting the marks, and as stated the cross-checking is to ensure accuracy (i.e., Logic & Accuracy Test).
21. Furthermore, nowhere in this guideline document does it say that the system must be recertified before every election due to changes in ballot layout from what was demonstrated during the original certification. It is implied that a thorough testing of the ballot layout and equipment by each election official, prior to each election, is sufficient to mitigate the risks of inaccurately programming - or laying out - the ballot. This type of testing is a best practice and standard not just in New Jersey, but across the country.
22. In the paragraph labeled 14, Mr. Swartz acknowledges "[t]he ballot layout demonstrated during the voting system certification was a traditional grid-style layout with candidates listed in columns and not the office-block layout Mr. Macias pointed out in his certification." He then goes on in the following paragraph (labeled paragraph 15) to claim that the "substantial change in ballot layout and format to what the New Jersey Division of Elections witnessed during the voting system certification process, raises the risk of voter confusion on election day therefore potential tabulation errors."
23. Even assuming Mr. Swartz's statement as true – that the "ballot layout demonstrated during the voting system certification was a traditional grid-style layout with candidates listed in columns and not the office-block layout" which I previously pointed to in my

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<sup>4</sup> <https://www.nj.gov/state/elections/assets/pdf/guidelines/2022-guideline-for-the-conduct-of-early-voting.pdf>

affidavit – his conclusion that an adjustment to an office-block layout requires additional retesting or recertification, or runs the risk of tabulation errors and voter confusion – belies what has been shown in the exhibits put forth in front of the court, testimony provided about how other states use the exact same software versions to design ballots without the county-line style and with an office block layout display, and testimony about how New Jersey counties already use office block ballot layouts in whole or in part. Taken to its logical conclusion, it falsely assumes that New Jersey’s prior use of the office-block display was done erroneously and without testing, certification, consideration of voter confidence, and ran risks of tabulation errors. This is simply not true, and there is no evidence to support this.

24. Mr. Swartz does not accurately describe that a uniform readjustment to an office-block layout is a “substantial change in ballot layout and format” (paragraph labeled 15) that would “require re-certification prior to use in New Jersey elections” (paragraph labeled 16). As previously demonstrated, Plaintiffs’ request is not for a “substantial change” but to make uniform a layout that is already in use in New Jersey in whole or in part, and which does not in my expert opinion require re-certification, nor testing above and beyond what is already required and conducted in the state.
25. Last, Mr. Swartz states that “[i]f the New Jersey Division of Elections requires re-certification of the voting system in order to confirm that the requested ballot layout modifications satisfy current state statutes, administrative rule, and certification requirements” that such a process “takes an additional one to three months, as it requires extensive testing with the New Jersey Division of Elections and potentially an independent evaluation by a third party should a systemic change be required to accommodate this specific ballot layout request” (Swartz Supplemental Certification, last paragraph). While I agree *if* the New Jersey Division of Elections requires recertification of the voting system, it will take one to three months, at minimum, it is my expert opinion, as stated in my expert report, this supplemental certification, and in my testimony at the Evidentiary Hearing, that there is no need for the New Jersey Division of Election to either recertify or retest the change in a ballot layout, especially since such modifications do not require any changes to the voting system software. It would be

atypical and would not conform to the norms of most certifying authorities to require such recertification and retesting.

26. My previously stated Conclusions, set out in paragraphs 56 - 59 of my expert report therefore remain the same and are reincorporated here by reference.
27. Also on March 18, 2024, in addition to the Supplemental Certification of Mr. Swartz, two motions in limine were filed to exclude my expert participation in this matter including my report, my opinions, and my testimony (ECF 152-2; ECF 158).
28. Those motions suggest that my expert report and testimony at the Evidentiary Hearing should be stricken due to some delay by the Plaintiffs. While I leave it to Plaintiffs' counsel to make the legal argument, please note that I worked as diligently as possible following my retention in this matter to produce a 29-page written analysis, and that my participation in this matter as a potential testifying witness was disclosed in advance of the filing of that report. More, I have been diligent in reviewing and responding to supplemental certifications filed by the defense even after my original written analysis, including those described and responded to above by County Clerk Holly Mackey on March 15, 2024 (ECF 139) (which I also addressed during my testimony) and ES&S's Mr. Swartz filed after the start of the March 18, 2024, Evidentiary Hearing (ECF 151.). Last, I testified during the Evidentiary Hearing, and the defense was given an ample opportunity to cross-examine me.

I declare under penalty of perjury under the laws of the United States of America that the foregoing statements are true and correct to the best of my knowledge and belief. Executed at Seoul, South Korea, on the 22nd day of March, 2024 (EDT).

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Ryan Macias